**Expera - Thilmany Mill - Item 2**

Item 2 - Provide the following information for the time period of 1/1/2013 to 1/1/2015 - Every bulk solid material handled (further clarified by Molly Smith to be materials stored outdoors), annual tonnage throughput for each, handling methods used to recieve, store, and ship each bulk solid material, which materials are screened or crushed, identify any dust controls used to minimize emissions from stockpiles, and maximum onsite storage for each material.

| Bulk Solid Material - Outdoor Storage | Purpose of Material | Storage Frequency | Screened/ Crushed | Handling Method | Dust Controls | Annual Throughput - tons | Max onsite storage - tons |
|---|---|---|---|---|---|---|---|
| Coal Blend typically 80% coal and 20% pet coke | Boiler Fuel | Continuous | Crushed Indoors Enclosed | Received as a blend by tarped semi truck. Unloaded onto paved storage yard either to the winter pile or day storage. 80% of the time the material is unloaded to day storage for immediate use. Material for the winter pile (typically three months to build) is compacted by driving on it with an endloader. Material in the day storage is pushed by endloader into the open grate which falls through a chute onto a belt conveyor in an underground tunnel. Coal is conveyed a short distance through this tunnel to an enclosed crusher and then goes to an enclosed incline conveyor where it is then conveyed inside the power plant. | Street sweeper used daily as needed in paved yard area and can be used more frequently when needed. When pile has been built for winter a sealant is applied | 140,000 - 150,000 | 9000 |
| Wet Wood Ash and Coal Bottom Ash | Boiler Ash to Landfill | Intermittent | No | Wet ash is stored in a fully enclosed outdoor silo adjacent to the flyash silo and is located in a protected area that is only accessible from the south. Most of the time this material is dropped directly to a truck and taken to landfill however there are times when the material is dropped to the paved surface below and loaded with an endloader into a truck and taken to landfill. | Material is wet. Any material dropped to the paved surface is taken to landfill within one day. | 20,000 - 25,000 | 40 |
| Wetted Coal Flyash | Boiler Ash to Landfill | Continuous | No | Flyash is stored in a fully enclosed outdoor silo. The silo is located in a protected area that is only accessible from the south. Material is dropped to a paved surface in batches and is continuosly wetted as it is being dropped. All material is loaded into a truck by enloader and taken to landfill within one day. | Material is wetted as it is dropped to a paved, protected surface. Material is taken to landfill within one day. | 13,000 - 14,000 | 40 |
| Wood Bark | Process Rejects | Continuous | Crushed Indoors Enclosed | Material is generated onsite when the logs are debarked inside the woodroom in the drum debarker. Bark is stored outside the woodroom and transferred by open conveyor to a building where it goes through an enclosed hogger (crushed) and then transferred by belt conveyor to the bark bin which feeds the No.7 boiler where the bark is burned. A separate pile is maintained outdoors for outside sales. | None - Bark is a relatively high moisture material. | 60,000 - 70,000 | 4000 |
| Paper Pellets | Boiler Fuel | Infrequent | Crushed Indoors Enclosed | Received by truck and mixed in with bark pile - currently not using | Same as bark | 0 - 20,000 | 500 |
| Woodyard Waste | Process Rejects | Continuous | No | Periodically areas of the woodyard are scraped clean to make room for new log piles. This produces a reject material comprised primarily of bark but also includes stones and soil. The material is temporarily stored onsite until it is loaded into trucks to be hauled to the landfill or used beneficially offsite. | None - Yardwaste is primarily bark which is a relatively high moisture material | 5,000 - 10,000 | 3000 |
| Logs | Raw Material | Continuous | No | Logs are received by rail and by truck. They are either unloaded directly to the incline conveyor feeding the woodroom or are stored in row piles in the woodyard. | None | 350,000 - 450,000 | 55,000 |
| Wood Chips | Raw Material | Continuous | Screened Indoors | Chips are produced onsite when the debarked logs are immediately fed to an enclosed chipper inside the woodroom and then conveyed to the outdoor chip pile. Chips are also received by rail and truck and unloaded directly to the chip pile. From the pile they are conveyed to the digester building of the pulp mill where they are screened indoors to remove fines. | None normally needed | 550,000 - 700,000 | 20,000 |
| White Lime Rejects | Process Rejects | Infrequent for high generation Intermittent for small generation | No | Most material is generated during spring and fall outage and is taken to landfill immediately or within a few days. All material is dropped to the main floor inside the lime kiln building and moved outside with endloader. This storage area is immediately adjacent to the lime kiln building. | The majority of the material is stored for a short time period and building provides protection from south winds | 50 - 100 | 25 |
| Lime Mud | Process Rejects | Infrequent | No | Lime mud (calcium carbonate) is a wet material that is dewatered in an enclosed precoat filter. This is fed to the lime kiln. However, there are infrequent times where the feed belt is reversed and the moist material is dropped directly adjacent to the building and taken to landfill within a few days. | Building provides protection from west winds and material is taken to landfill. Material is high moisture. | 50 - 500 | 0.5 |
| TDF - Tire Derived Fuel | Boiler Fuel | Continuous | No | TDF is a larger size material with minimal fines and is received by truck and unloaded onto the east end of the paved coal yard. It is stored in a three sided bunker built with concrete blocks. Endloader transfers to a feed bin directly on top of the enclosed coal conveyor where the material drops onto the conveyor. | Partial enclosure provides some wind protection | 3000 - 6000 | 120 |
| Slaker Grits | Process Rejects | Intermittent | No | Lime is slaked onsite and this generates a small amount of slaker grits which are dropped through the second floor of the lime kiln building to the ground floor. This area is fully enclosed except for one wall which is open to the outside to allow an endloader to scoop the material and load into a truck. | Almost total enclosure provides protection from wind. Material is high moisture | 50 - 500 | 0.5 |

| Bulk Solid Material - Outdoor Storage | Purpose of Material | Storage Frequency | Screened/ Crushed | Handling Method | Dust Controls | Annual Throughput - tons | Max onsite storage - tons |
|---|---|---|---|---|---|---|---|
| Green Liquor Dregs | Process Rejects | Continuous | No | Green liquor is a cooled slurry of recovery boiler smelt and water. It is thickened in a indoor clarifier and is processed through an enclosed filter. Rejects are dropped through the floor into the same enclosed area as the slaker grits. This allows an endloader to remove the dregs where they are loaded into a truck and taken to landfill. | Almost total enclosure provides protection from wind. Material is high moisture | 3000 - 5000 | 30 |
| Wood knots | Process Rejects | Continuous | Screened Indoors | Cooked pulp is screened to remove wood knots which did not completely cook. The knots are dropped through the 2nd floor of the digester building to the ground floor. This area is fully enclosed except for one wall which is open to the outside to allow an enloader to take the knots to the chip pile. The knots are recycled through the pulp process | Almost total enclosure provides protection from wind and material is high moisture | 3000 - 4000 | 0.5 |
| Sand/Salt Mix | Winter Safety | Seasonal | No | Received by dump truck and stored at the wastewater treatment plant. Pile is contained by concrete blocks on three sides. Material is removed as neeeded to address winter weather conditions. | Partial enclosure provides some wind protection | 200 - 300 | 40 |
| Wet Lap Pulp | Final Product | Infrequent | No | Wet lap pulp (50% moisture) is produced for some outside sales, transfer to Expera's Nicolet Mill, and for internal use when the pulp mill is down. Lap is stored on wood pallets and can be stored outdoors. | None - material is in sheet form and is high moisture | 0 - 5000 | 4400 |